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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/770,351	01/26/2001	Hyun Soo Paik	A33933	6260

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EXAMINER	
NG, CHRISTINE Y	

ART UNIT	PAPER NUMBER
2663	4

DATE MAILED: 08/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/770,351	PAIK, HYUN SOO	
	Examiner	Art Unit	
	Christine Ng	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 January 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4* is/are rejected.

7)☒ Claim(s) *5-6* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 January 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what "a predetermined operation function" (line 4) refers to.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,920,412 to Chang in view of U.S. Patent No. 5,359,600 to Ueda et al.

Referring to claim 1, Chang discloses in Figures 4, 6 and 7 an ATM optical signal matching apparatus. The apparatus comprises:

A plurality of user-network matching parts (Figure 4; STM ADM 28 and ATM ADM 32) for processing signals.

A bus switch (Figure 4; Type Check 24) for exchanging signals with the plurality of user-network matching parts (Figure 4; STM ADM 28 and ATM ADM 32).

A loop back processor (Figure 6; ADM 60a-60c and Figure 7; VP ADM 70a-70c) for returning a signal received through the bus switch (Figure 4; Type Check 24) to an original transmitter (Optical network 12) sending the signal according to a predetermined control signal (non-local signal). The ADM 60a-60c and VP ADM 70a-70c sends a signal back to the optical network 12 if it is a non-local signal and sends a signal to the STM switch 20 and ATM switch 10, respectively, if it is a local signal. Refer to Column 16, line 62 to Column 17, line 4; Column 17, lines 32-39 and Column 21, lines 18-34 and lines 57-64.

A controller (Figure 6; STM ADM controller 62 and Figure 7; ATM ADM Controller 72) for providing a control signal to the user-network-matching parts (Figure 4; STM ADM 28 and ATM ADM 32) and the loop-back processor (Figure 6; ADM 60a-60c and Figure 7; VP ADM 70a-70c) according to a program stored therein. The STM ADM controller 62 and ATM ADM controller 72 is provided with programming and a database to keep track of local and non-local STM and ATM signals, respectively, transmitted through the ADM. Refer to Column 19, lines 26-52 and Column 23, line 63 to Column 24, line 10.

Chang does not disclose a plurality of photoelectric conversion parts for photoelectric converting input data before being transmitted/received to the user-network matching parts (Figure 4; STM ADM 28 and ATM ADM 32).

Ueda et al disclose in Figure 1 a plurality of photoelectric conversion parts 12 for converting optical input data into electrical input data before being transmitted/received to an ADM 13. "...incoming optical signals are converted to electrical signals by O/E

transducers 12 and multiplexed by an add/drop multiplexer 13 for coupling to an STM-ATM incoming trunk circuit 14..." (Column 2, lines 44-48). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a plurality of photoelectric conversion parts for photoelectric converting input data; the motivation being so that the system can convert the information signals transmitted as light pulses through the media into an electrical format that can be recognized and processed a STM/ATM ADM.

5. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,920,412 to Chang in view of U.S. Patent No. 5,359,600 to Ueda et al, and in further view of U.S. Patent No. 6,446,146 to Yamaguchi et al.

Referring to claim 2, Chang and Ueda et al do not disclose that each of the plurality of photoelectric conversion parts photoelectric-converts data having the transfer rate of 155.520 Mbps.

Yamaguchi et al disclose in Figure 2 a photoelectric conversion part (Optical module section 101a) which converts an optical signal of the transmission path into an electrical signal having a line speed of 155.52 Mbps. Refer to Column 3, lines 42-52. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the plurality of photoelectric conversion parts photoelectric-converts data having the transfer rate of 155.520 Mbps; the motivation being that a transfer rate of 155.52 Mbps is the base rate of STM signals and is also equal to three times the base rate of OC signals.

Referring to claim 3, Chang and Ueda et al do not disclose that each of the plurality of user-network matching parts is connected to four of the photoelectric conversion parts to match data at the transfer rate of 622 Mbps.

Yamaguchi et al disclose in Figure 2 that the ATM switch side of the line terminating device is connected to a photoelectric conversion part (Optical module section 101b) which converts an optical signal of the transmission path into an electrical signal having a line speed of 622 Mbps. Refer to Column 3, lines 42-52. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that each of the plurality of user-network matching parts is connected to four of the photoelectric conversion parts to match data at the transfer rate of 622 Mbps; the motivation being that a transfer rate of 622 Mbps is equal to four times the base rate of STM signals and twelve times the base rate of OC signals.

Allowable Subject Matter

6. Claims 5 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (703) 305-8395. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nguyen Chau can be reached on (703) 308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C. Ng CW
July 21, 2004

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